

TECHNOLOGY DEPARTMENT

JOURNAL

Vol. 38, No. 2

FEBRUARY, 1959

SUPPLEMENT

THE INSTITUTION OF PRODUCTION ENGINEERS, 10 CHESTERFIELD STREET, MAYFAIR, LONDON, W.1

SEVENTH CONFERENCE ON
PROBLEMS OF AIRCRAFT PRODUCTION

(promoted by the Southampton Section of the Institution)

at the

UNIVERSITY OF SOUTHAMPTON

(by kind permission of the Vice-Chancellor)

Thursday, 16th April and Friday, 17th April, 1959

Theme: "The Aircraft Industry - A National Asset"

PROGRAMME

The Conference will commence with the official luncheon on Thursday, 16th April, when the principal speakers will be **The Worshipful The Mayor of Southampton** and **Air Chief Marshal Sir Claude Pelly, K.C.B., C.B.E., M.C., A.D.C.** Following the luncheon, the 1959 Lord Sempill Paper will be presented by **Lord Douglas of Kirtleside, G.C.B., M.C., D.F.C.,** Chairman of British European Airways, whose subject will be "THE OPERATOR".

Other speakers will be:

Mr. Peter Masefield, M.A., F.R.Ae.S., M.Inst.T., F.I.Ae.S., C.I.Mech.E., Managing Director, Bristol Aircraft Ltd., who will talk on "THE INDUSTRY"; and

Mr. S. P. Woodley, M.B.E., General Manager, Vickers-Armstrongs Aircraft Ltd., who will discuss "THE IMPACT ON OTHER INDUSTRIES".

The final Session of the Conference will take the form of an open Forum when the three principal speakers, together with **Sir Arnold Hall, M.A., F.R.S., A.C.G.I., F.R.Ae.S.,** President of the Royal Aeronautical Society, and Technical Director of the Hawker Siddeley Group; and **Mr. Eric Turner,** Chairman and Managing Director, Blackburn & General Aircraft Ltd., will discuss the importance of the aircraft industry in the national economy.

The Conference will end at midday on Friday, 17th April, 1959.

The Conference fee, inclusive of prints of Papers, luncheon and light refreshments, is £4. Applications should be made on the form overleaf. Places will be allotted in strict order on receipt of applications, and priority will be given to members of the Institution who apply before **Monday, 23rd March, 1959.**

CLOSING DATE FOR APPLICATIONS — MONDAY, 30th MARCH, 1959

To: The Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

DATE RECEIVED AT HEAD OFFICE

MEMBER / NON-MEMBER

SEVENTH AIRCRAFT PRODUCTION CONFERENCE

1. NAME.....
2. GRADE OF MEMBERSHIP.....
3. HONOURS, DEGREES, OTHER QUALIFICATIONS.....
4. ADDRESS.....
5. NAME OF COMPANY.....
6. POSITION HELD.....

N.B.—If more than ONE ticket is required, please supply information 1 to 6 on a separate sheet of paper for each ticket applied for.

Please send me ticket(s) at 80/- each, for which I enclose remittance for £.....

Signature.....

Date.....

Please note that cheques, etc., should be made payable to "The Institution of Production Engineers". Receipts will not be issued. Tickets and joining instructions will be sent in good time.

**BRITISH CONFERENCE ON AUTOMATION
AND COMPUTATION**

of which

THE INSTITUTION OF PRODUCTION ENGINEERS

is a member

I. F. A. C.

(International Federation of Automatic Control)

**INTERNATIONAL CONGRESS
FOR AUTOMATIC CONTROL**

Moscow June 25th-July 5th 1960

Section I — Theoretical and Experimental Investigations in Automatic Control and Servo-mechanisms.

Section II — Instrumentation and Investigations Connected with the Development of Automatic Control Systems.

Section III — Industrial Applications of Automatic Control.

Visits are also being arranged to cultural and industrial centres in and around Moscow.

Members of the Institution (or their firms) who would like to present Papers are invited to communicate immediately with the Secretary of the Institution for further information.

Synopses of Papers (300 to 500 words, without illustrations), in quintuplicate, should be available by 1st April, 1959.

*The Secretary,
The Institution of Production Engineers,
10 Chesterfield Street, Mayfair, London, W.1.*



THE 1958 VISCOUNT NUFFIELD PAPER

Members are reminded that the 1958 Viscount Nuffield Paper will be presented at the University of Birmingham on **Wednesday, 11th March, 1959**. The speaker will be **Dr. N. P. Inglis**, Research Director of the Metals Division, Imperial Chemical Industries Ltd., who will take as his subject :-

"THE PRODUCTION, FABRICATION, PROPERTIES AND USES OF SOME OF THE NEWER METALS"

The Paper will be followed by open discussion.

Admission to the meeting will be by ticket only, which may be obtained from : The Secretary, The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London, W.1, using the form of application overleaf.

COVENANT MEMBERSHIP SUBSCRIPTIONS

In view of the provision made under Section 16 of the Finance Act, 1958, the Institution's Finance and General Purposes Committee has decided that all membership subscription Covenants shall be cancelled as from 1st April, 1958. The order has been made retrospective so that members may claim for relief of income tax on their annual membership subscription for the current year.

SECTION SOCIAL FUNCTIONS

HALIFAX AND HUDDERSFIELD SECTION

The **Annual Dinner-Dance** will take place on **Friday, 27th February, 1959**, at the **White Swan Hotel, Halifax (7 p.m. for 7.30 p.m.)**. Enquiries regarding tickets should be made to : The Social Secretary, Miss N. E. Bottom, Hopkinsons Ltd., Huddersfield.

LONDON SECTION

Dinner to be held on **Wednesday, 11th February, 1959**, at **The Connaught Rooms, Great Queen Street, London, W.C.2 (7 p.m. for 7.30 p.m.)**. Tickets 30s. (remittances should be made payable to The Institution of Production Engineers). Applications to : Mr. R. J. C. Whitaker, Glacier Metal Co. Ltd., Alperton, Middlesex.

BIRMINGHAM GRADUATE SECTION

25th Anniversary Grand Buffet Dance, to be held on **Thursday, 5th March, 1959**, at the **Pavilion Suite, County Ground, Edgbaston (8 p.m. to midnight)**. Tickets 15s. each. Applications to : Mr. E. J. Lownes, Publicity Secretary, 42 Stoney Lane, Bloxwich, Staffs. (enclosing stamped addressed envelope). Remittances should be made payable to The Institution of Production Engineers (Birmingham Graduate Section) and crossed "Social Account".

To : The Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

THE 1958 VISCOUNT NUFFIELD PAPER
at the University of Birmingham, 11th March, 1959

Please send me, when available. tickets of admission to the above meeting.

NAME.....
(Block letters please)

ADDRESS.....

PRODUCTION CONTROL STUDY GROUP

This Study Group, which has been arranged by the British Institute of Management in collaboration with The Institution of Production Engineers, will be held at **Management House, 80 Fetter Lane, London, E.C.4**, commencing **17th March, 1959**.

The promoting bodies, aware of the increasing importance of the production control function, have arranged this series of meetings to provide production managers, general managers and production controllers with an opportunity to meet and consider various aspects of production control. It is intended that the Group will meet for a series of 10 afternoon meetings at weekly intervals, commencing 17th March, 1959. At each meeting a new aspect of the subject will be introduced by a leading authority who will then act as Study Group Leader.

Full details of these meetings may be obtained from : **Mr. A. Green, Head of Production Section, British Institute of Management, Management House, 80 Fetter Lane, London, E.C.4**, to whom all enquiries regarding the Group should be directed.

The Study Group fee will be £10. A limit has been placed on the size of the Group to permit free discussion, and in view of this applicants should not assume that they have been accepted, or send any money, until they have received confirmation. Members of the Institution who wish to attend this series of meetings are advised to make early application.

CONFERENCE ON QUALITY CONTROL

A Conference on Quality Control is being arranged by the Willesden and Hendon Productivity Committee, and will take place on **Thursday, 26th February, 1959**, at **21 Tothill Street, London, S.W.1**.

Papers will be presented on the following subjects :-

- "The Need for Quality Control, with particular reference to Design, Production and Costs."
- "The Organisation Needed for Quality Control and the Status of the Quality Control Engineer."
- "The Methods of Quality Control."
- "Quality Control on the Shop Floor and the Human Relations Aspect."
- "The Advantages of Quality Control" — case studies.

This Conference will be followed by a 2½-days' seminar to be held towards the end of April at Willesden Technical College.

Members interested in obtaining further details of these activities should write to : **The Conference Secretary, Dr. G. S. Brosan, Willesden and Hendon Productivity Committee, Willesden Technical College, Denzil Road, London, N.W.10**.

REGIONAL MEETING

EASTERN REGION

7.30 p.m. February 11th

Sexton Room, The Assembly House, Norwich.

A Lecture will be given on "Manufacture of Tubing". This will be illustrated by a film.

SECTION MEETINGS

Visitors Tickets may be obtained from Section Honorary Secretaries

FEBRUARY, 1959

EAST AND WEST RIDINGS REGION

Halifax & Huddersfield Graduate 7.30 p.m. February 18th
Huddersfield Technical College, Huddersfield.
Film Evening. "Numerical Control" (Ferranti); "Just an Idea" (C.O.I.); "Mediterranean—Cape Rally 1953" (Shell); followed by Annual General Meeting (members only) at 8.15 p.m.
Leeds Graduate 7 p.m. February 11th
Hotel Metropole, Leeds, 1.
Film Evening. Three films will be shown entitled as follows: "The Belgian Grand Prix, 1955"; "Handle With Care"; and "Le Mans, 1956".

EASTERN REGION

Ipswich & Colchester 7.30 p.m. February 13th
Golden Lion Hotel, Cornhill, Ipswich.
"Controlled Output Through a Method of Collective Incentive Payment" by R. H. Pope, A.M.I.Prod.E., and P. G. Limpkin. (Joint meeting with the Norfolk and Suffolk Branch of the Institute of Cost and Works Accountants.

MIDLAND REGION

Birmingham 7 p.m. February 18th
James Watt Memorial Institute, Great Charles Street, Birmingham.
"New Materials — New Techniques — They Challenge the Production Engineer" by Derek Wragge-Morley.
Coventry 7.15 p.m. February 16th
Craven Arms, High Street, Coventry.
"Induction Heating and its Applications" (illustrated by colour film).
Coventry Graduate February 11th
Visit to Stewarts & Lloyds, Corby.
Shrewsbury 7.30 p.m. February 24th
Walker Technical College, Oakengates.
"Employers' Liability for Injury at Work" by T. Wylie, Dip.Pol.Econ.Sc.(Oxon.).
Wolverhampton Graduate 7 p.m. February 18th
Wolverhampton and Staffordshire College of Technology, Wulfruna Street, Wolverhampton.
"A.B.C. of Machine Tool Control" by M. G. Page, A.M.I.Mech.E., A.M.B.I.M., A.M.I.Prod.E.
Wolverhampton Graduate February 19th
Afternoon visit to Accles & Pollock Ltd., Oldbury.
Worcester 7.30 p.m. February 26th
College of Further Education, Redditch.
"Fibreglass Development and Application" by G. C. Watson.

NORTHERN IRELAND REGION

Northern Ireland 7.30 p.m. February 19th
The Kensington Hotel, College Square East, Belfast.
"Presidential Address" by The Rt. Hon. The Earl of Halsbury, F.R.I.C., F.Inst.P., M.I.Prod.E.

NORTHERN REGION

Newcastle upon Tyne 7 p.m. February 16th
Rutherford College of Technology, Northumberland Road, Newcastle upon Tyne.
"Practical Application of Production Engineering Research" by Dr. D. F. Galloway, Ph.D., B.Sc.(Hons.), Wh.Sch., M.I.Mech.E., A.M.I.E.E., M.I.Prod.E.
Tees-Side 7 p.m. February 9th
The College of Further Education, Cleveland Avenue, Darlington.
"Impact Extrusion" by H. W. Byles.

NORTH MIDLANDS REGION

Derby 7 p.m. February 23rd
Louis Room, St. James's Restaurant, St. James's Street, Derby.
"Automobile Testing and Development" by R. D. Foord-Kelsey (illustrated by slides and films).
Leicester 7.15 p.m. February 12th
The Cromwell Room, Grand Hotel, Leicester.
Annual General Meeting (members only), followed by a lecture at 7.45 p.m. on "Friction and Lubrication in Production Plant Spindles and Bearings" by T. N. Bennett, Stud.I.Prod.E. (Visitors welcomed to the lecture.)
Lincoln 7.30 p.m. February 26th
Ruston Club, Lincoln.
"Motor Car Body Industry" by J. H. Stephens.
Loughborough College Student 7.30 p.m. February 12th
Schofield Building, College of Technology, Loughborough.
"We Build the Jig Mill" by R. C. Fenton, M.I.Prod.E.
Loughborough College Student 1 p.m. February 18th
Visit to Alfred Herbert Ltd Rendezvous: Loughborough College. Transport by coach.
Peterborough 7.30 p.m. February 18th
Conference Room, Peterscourt, Peterborough.
"Production Control — Works Management Viewpoint" by L. P. Simpson, M.I.Prod.E.

NORTH WESTERN REGION

Liverpool 7.30 p.m. February 11th
Exchange Hotel, Tithebarn Street, Liverpool, 2.
"Statistics — Operational Research." (Joint meeting with the Royal Statistical Society, Industrial Applications Section, Merseyside Group.)
Manchester 7.15 p.m. February 23rd
Reynolds Hall, Manchester College of Science and Technology, Sackville Street, Manchester.
"Handling and Packing for Export" by D. G. S. Miller.
Manchester Graduate 7.15 p.m. February 12th
Reynolds Hall, Room C3, Manchester College of Science and Technology, Sackville Street, Manchester.
"Production Control by Punched Cards" by E. S. Carden.

Preston 7.30 p.m. February 11th
Harris College of Further Education, Corporation Street, Preston.
"Materials Handling—A Challenge to British Industry" by A. G. Hayek, M.I.Prod.E., M.Amer.S.Mech.E. (Joint meeting with the Institute of Welding, Preston Branch.)

SCOTLAND REGION

Edinburgh 7.30 p.m. February 18th
North British Hotel, Princes Street, Edinburgh.
"The Production Engineer and Line Management" by J. Gloag, B.Com., F.C.I.S., F.A.C.A., A.M.I.I.A. An invitation is extended to anyone interested in the subject of human relationship in industry.

Glasgow 7.30 p.m. February 19th
Institution of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow, C.2.
"Some Problems Associated with the Selection of Machine Tools for Heavy Engineering Production" by J. Henderson, M.I.Mech.E., M.I.Prod.E.

SOUTH EASTERN REGION

London 7 p.m. February 19th
Royal Empire Society, Northumberland Avenue, Strand, London, W.C.2.

"Planned Maintenance of Electrical and Mechanical Equipment in a Paper Mill" by C. A. Castle, A.M.I.E.E., and D. W. Bexton, Grad.I.Mech.E. (This will be a joint meeting of the London Senior and Graduate Sections.)

Rochester & District Graduate 7.30 p.m. February 26th
The Sun Hotel, Chatham High Street, Chatham.
"New Techniques in Non-destructive Testing" by W. G. Cook, B.Sc.

South Essex 7.30 p.m. February 11th
Southend-on-Sea Municipal Technical College.
"Epoxy Resins" by A. B. Cameron.

SOUTHERN REGION

Oxford 7.30 p.m. February 17th
Town Hall, Oxford.
"Machine Tools" by R. Asquith, M.I.Prod.E.

Southampton 7.15 p.m. February 19th
Polygon Hotel, Southampton.
"Manufacture and Application of Junction Transistors" by E. Wolfendale.

SOUTH WESTERN REGION

Gloucester 7.30 p.m. February 20th
The Technical College, Brunswick Road, Gloucester.
"Fine Measurement" by Dr. J. C. Evans, B.Sc., Ph.D. (Joint meeting with the Gloucester Engineering Society.)

Western 7.30 p.m. February 25th
The Town Hall, Weston-super-Mare.
"Metallic Materials Development" by S. G. E. Nash, M.I.Prod.E.

Western Graduate 7.30 p.m. February 11th
Small Lecture Theatre, Engineering Faculty, University of Bristol, Bristol.
"Vacuum Investment Casting" by M. E. Harper, Graduate of the Institute of Physics. (Combined lecture with the Graduate Section of I.Mech.E.)

WALES REGION

Cardiff 7 p.m. February 27th
South Wales Institute of Engineering, Park Place, Cardiff.
"Compressed Air and Some of its Practical Applications" by W. J. Ford, M.I.Prod.E. (illustrated by slides and demonstration).

Swansea 7 p.m. February 18th
Central Library, Swansea.
"Unconventional Tooling" by S. E. Kirk, M.B.E., M.I.Prod.E.

MARCH 3rd-10th

EAST AND WEST RIDINGS REGION

Sheffield 6.30 p.m. March 9th
Grand Hotel, Sheffield.
Regional Meeting. A lecture will be given on "Ergonomics in Industry".

Doncaster 7 p.m. March 10th
Technical College Hall, Doncaster.
Annual General Meeting (members only).

MIDLANDS REGION

Birmingham Graduate 8 p.m. - midnight March 5th
Pavilion Suite, Warwickshire County Cricket Ground, Edgbaston, Birmingham.

Graduate Dance. Tickets 15s. inclusive of buffet. Applications for tickets to: E. John Lownes, "Chartres", 42 Stoney Lane, Bloxwich, Walsall, Staffs. (Please enclose stamped addressed envelope.)

Birmingham 7 p.m. March 10th
James Watt Memorial Institute, Great Charles Street, Birmingham.

Annual General Meeting (members only) at 7 p.m. Chairman's Address commencing at 7.30 p.m. "Interesting Set-ups in Heavy Axle Production" by D. J. White, Grad.I.Prod.E.

Coventry Graduate March 3rd
Annual General Meeting (members only).

Wolverhampton 7.15 p.m. March 4th
Wolverhampton and Staffordshire College of Technology.
"Modern Developments in Forging Techniques" by R. E. Winch.

NORTH MIDLANDS REGION

Nottingham March 3rd

Visit to Shell Oil Refinery, Stanlow.

Nottingham 7 p.m. March 4th

The Reform Club, Victoria Street, Nottingham.

Annual General Meeting (members only).

NORTH WESTERN REGION

Stoke-on-Trent 7 p.m. March 9th

Grand Hotel, Hanley, Stoke-on-Trent.

Annual General Meeting (members only), followed by a lecture "Modern Welding Processes" by H. Roberts, M.I.W., commencing at 7.30 p.m.

SCOTLAND REGION

Glasgow 7.30 p.m. March 5th
The Institution of Engineers and Shipbuilders, 39 Elmbank Crescent, Glasgow, C.2.

Annual General Meeting (members only) and open discussion.

SOUTH EASTERN REGION

London Graduate March 10th
Full day visit to J. Stone & Co. (Charlton) Ltd., Woolwich Road, Charlton, London, S.E.7.

Luton 7.30 p.m. March 10th
Small Assembly Room, Town Hall, Luton.
Annual General Meeting (members only).

SOUTHERN REGION

Oxford 7.30 p.m. March 10th

Town Hall, Oxford.

"Financial Aspect of European Free Trade and the Common Market" by C. R. Curtis, M.Sc., Ph.D., F.C.I.S.

Reading 7.30 p.m. March 5th

Great Western Hotel, Reading.

10th Annual General Meeting (members only) Open Forum at 8 p.m. (Visitors welcomed to the Open Forum.)

Southampton 7.15 p.m. March 6th

Polygon Hotel, Southampton.

Annual General Meeting (members only).

SOUTH WESTERN REGION

Gloucester 7 p.m. March 9th

North Gloucestershire Technical College, The Woodlands, The Park, Cheltenham.

"The Russian Approach and Background to Machine Tool Production" by Norman Stubbs, M.B.E., B.Sc.(Hons.).

PRODUCTION APPOINTMENTS

BULLETIN No. 65
FEBRUARY 1959

The last date for receiving material for insertion in the following month's bulletin is the 20th of each month, and cancellations cannot be accepted after this date. Correspondence should be addressed to: The Publications Department, The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London W.1 (Telephone: GROsvenor 5254). The fee for insertion of particulars regarding each appointment is £4 4s. (up to 100 words) and £1 1s. for each additional 100 words or part thereof. The special rate per insertion for firms affiliated to the Institution, technical colleges and universities is £2 2s. for each appointment.

Advertisers are advised that better response is likely if, in addition to essential qualifications, the following information is given:—
(a) Location of appointment; (b) Status in the organisation and scope of promotion; (c) Salary range and age range. Advertisers are asked to advise the Institution when appointments are filled. The Institution reserves the right to refuse or withdraw any announcement and also to make any alteration in the wording to ensure conformity with the Institution standards. *Members interested in the following appointments should make application in accordance with the terms of notice. No correspondence can be undertaken by the Secretary other than the forwarding of replies to Box Nos.*

Technical Assistants. Applications are invited from young engineers or technicians to assist in the development of an industrial engineering division. Applicants should have experience in dealing with the technical problems of operational analysis and methods as applied to one or all of the following: machine shops, fabricating and erection departments of a medium/heavy engineering industry. Qualifications: H.N.C. (Mech.) minimum or equivalent. Age 25-35. Attractive and interesting appointments. Applications, in writing, with relevant details in confidence stating approximate salary required to: Personnel Manager, Ruston-Bucyrus Ltd., Excavator Works, Lincoln.

Industrial Consultants or Engineers with considerable experience in production planning, work study and production control and who are University Graduates, are invited to apply for a position on the senior production staff of a well-known company with several factories in the Midlands and abroad. This is a high-level appointment and a commensurate salary will be offered. There will be opportunities for advancement to top-level managerial positions within a few years. Age limits 25-35. There is an excellent pension scheme. All applications will be treated in strict confidence and should state age, qualifications and experience to: Box No. 1821, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Design Engineers. Hymatic Automation require Design Engineers for expanding division making automatic linking, feeding, loading and assembly devices for quantity production. H.N.C. with membership of The Institution of Production Engineers or The Institution of Mechanical Engineers and design experience desirable. Non-contributory pension scheme. Applications to: Manager, Automation Division, Hymatic Engineering Co., Redditch.

Project and Sales Engineer. Hymatic Automation require Project and Sales Engineer for expanding division making linking, feeding, loading and assembly devices for quantity production. H.N.C. with membership of appropriate institution desirable. Age 25-35. Non-contributory pension scheme. Car allowance available for operations from Redditch after training period. Applications to: Sales Manager, Hymatic Engineering Co., Redditch.

Director and General Manager required for automobile body and presswork company located in the Midlands. Experience: press tool design and body building on a moderate quantity basis; paint and finish; production organisation; management and public relations. Qualifications: previous appointment in managerial position essential; M.I.Mech.E., University degree preferred but not essential if record is good. This appointment offers considerable opportunity for an energetic and able man with the necessary experience to take sole charge of an existing plant now fully occupied. Salary £3,000-£4,000 per annum; car; pension scheme. Box No. 1824, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Production Planning Engineers. A North-West London precision engineering company requires the services of two senior and experienced production planning engineers. An excellent opportunity for the right men to join the staff of a progressive company. Apply in first instance, giving essential personal details and brief resumé of experience to: Box No. 1822, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1. All applications will be treated in confidence.

Production Engineer to assume control of all production engineering functions in electro mechanical manufacturing business. This post offers wide scope and room for initiative due both to expansion of manufacturing capacity and product range. Applicants must possess methods and planning experience and sound knowledge of press tool techniques. Membership of either Mechanical or Production Engineers an advantage but not essential. First-class opportunity for first-class man, with salary up to £1,800. Contributory pension scheme. Please apply, stating age, experience and salary required to: Box No. 1823, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Sales and Service Engineer with sound mathematical grounding and experience of gear cutting procedure is required by a machine tool sales organisation in India. Single men between the ages of 22-28 are preferred. The successful applicant will receive some months' specialist training in America. The appointment carries a starting salary of £1,600-£1,700 per annum, plus travelling expenses to and from India, medical expenses and Provident Fund scheme. The initial contract will be three years' service in India at the end of which the employee will be granted six month's home leave on full salary. Write, giving full details, including age and experience. Box No. 1825, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Machine Shop Superintendent required by Beaver Machine Tools. Only young men able to produce absolutely first-class machine tool components of highest quality and fine limits, and previously employed by a company of standing in such work, will be considered. Plant to handle includes all machine shop facilities necessary to produce machine tools in their entirety. Present number of employees 120, developing to 200. Monthly staff appointment. Excellent scope for top grade "go-getter" executive. Apply in complete confidence, stating career in correct chronological order, together with commencing salary required to: Balding Engineering Ltd., Beaver Works, Norwich.

Engineers. An interesting and responsible position is offered to engineers who have the ability to organise and operate special technical courses for responsible engineering personnel. The successful candidate must possess a sound practical engineering background — personality — and the ability to put over to specialist engineers — by lecture and discussion — subjects of a controversial nature. Write, giving full details to: The Secretary, Production Engineering Research Association, Melton Mowbray, Leicestershire.

Sales Engineer. Production Engineer interested in being Sales Engineer required for North-West Birmingham and Black Country area for the sale of a wide range of precision tooling equipment. Remuneration by fixed salary, plus car and expenses. Applications invited to: Box No. 1826, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Trainer. Lockheed Hydraulic Brake Co. Ltd. invite applications for the position of Trainer in their Central Inspection Department, who will be required to undertake the training of all grades of personnel in modern methods of the control of quality. Applicants should have a minimum qualification of H.N.C. (Mechanical or Production) with a sound practical background. A wide experience of inspection and planning techniques is desirable, together with a knowledge of statistical quality control and the ability to instruct. Excellent working conditions. Profit sharing and pension schemes. Applications, in writing, stating full details of age, experience and qualifications to: The Employment Officer, Lockheed Hydraulic Brake Co. Ltd., Leamington Spa, Warwickshire.

Works Manager. Well-known manufacturers of automatic controls for heating plant and processes invite applications for exceptionally interesting and promising post. Medium size, modern, well-equipped works at Crawley, Sussex. Applicant (35-45 preferred) must be well qualified and have sound knowledge and practical experience of batch production methods and planning and labour control. Salary commensurate with qualifications and experience. Contributory pension scheme. Housing can be arranged. Please apply confidentially in writing, giving full personal, technical and commercial particulars and indicating approximately remuneration expected to: Box No. 1827, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Experienced Methods Engineer. North British Rubber and U.S. Rubber of America are continuing their programme of expansion at Castle Mills, Edinburgh, and require the services of an experienced Methods Engineer for the Industrial Engineering Division at Castle Mills, Edinburgh. Candidates should have served an apprenticeship, had drawing office experience and be 25-35 years of age. A flair for this work is more important than high academic attainments, but a minimum level of H.N.C. or equivalent is desired. Salary will be attractive and in line with the responsibilities of the appointment. Company benefits include a contributory superannuation scheme and free life assurance. Applications, marked "M.E.", giving full details of qualifications, experience and age, should be addressed to: Industrial Relations Division, The North British Rubber Co. Ltd., P.O. Box 47, Castle Mills, Edinburgh, 3.

Factory Planning and Materials Handling Engineer. An experienced engineer, aged 28-35, is required by a progressive Company for the specialist study and application of materials handling principles and for the preparation of factory layouts. The Company, which covers nine acres, employs approximately 900 people and has several divisions including non-ferrous metal rolling and tube drawing; plastics moulding and light engineering. Applicants should write, giving details of experience, education and present salary to: Production Development Engineer, Messrs. Evered & Co. Ltd., Surrey Works, Smethwick, 40, Staffs.

Fully Experienced Estimator and Planning Engineer for stainless steel fabrication and chemical engineering work. Must have had machine shop, plating shop, sheet metal, and welding experience and be capable of controlling a department. This appointment will attract a four-figure salary. Please apply to: Freeman, Taylor Machines Ltd., Necton Street, Syston, Leicester.

Production Engineer with first-class ability in factory management, and preferably with specialised knowledge of plastics, required to join team of young executives in expanding organisation. Please state qualifications, experience and salary required in detailed application to: Managing Director, Box No. 1828, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Head of Production Engineering. Reads Ltd., of Liverpool, invite applications for the above post. The holder will be required to build up and manage a department responsible for dealing with production problems in the can and drum making industry. Candidates should have occupied a post of similar responsibility, preferably in the metal container industry. They should possess a qualification equivalent to A.M.I.Prod.E., or have had considerable experience of the industry. Salary will be negotiated on the basis of experience and knowledge of the industry. Further particulars and a form of application from: The Senior Personnel Officer, Reads Ltd., Orrell House, Orrell Lane, Liverpool, 9.

Production Engineers. Reads Ltd., of Liverpool, require a number of production engineers between the ages of 25-35. Whilst experience in the metal container industry would be desirable, this is not essential if candidates are conversant with problems arising from mass production. H.N.C. or equivalent qualification essential. Opportunities are considerable in an expanding organisation. Salary subject to negotiation on a basis of experience. Apply to: The Senior Personnel Officer, Reads Ltd., Orrell House, Orrell Lane, Liverpool, 9.

Senior Tool Designer required, preferably with experience of the design of tools, jigs and fixtures for the batch production of electronic equipment. Sound practical experience first consideration. This is a responsible position with a commensurate salary, and a pension scheme is in operation. Apply to: Personnel Officer, Airmec Ltd., High Wycombe, Buckinghamshire.

Production Manager. Applications are invited for the post of Production Manager with an old-established and expanding company in Scotland; actual production experience necessary in light engineering, fitting and assembly work; commencing salary £1,500-£2,000 per annum, preference given to a man between 35-45 of good education and engineering qualifications, capable of taking advantage of the excellent prospects offered and advancing to a higher position. Write full details in confidence to: Box No. 1829, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Men with engineering qualifications or experience interested in developing a selling career in Great Britain with a well-known international rubber company are invited to apply for an interview. Applications are also invited from engineers with no previous selling experience who are able to indicate that they have selling potential. Preference is for candidates between 28-40 years of age and appointment carries substantial basic salary, expenses, car, pension scheme with insurance policy and opportunity to progress. Immediate vacancies exist in East Riding of Yorkshire, Durham and Cumberland, and the London area. Applications should state age and past experience. Box No. 1830, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Design Engineer for Cape Town, South Africa. This top ranking position is shortly becoming vacant. A Design Engineer of the highest calibre in the light current field with the accent on industrial electronic equipment and transformer design is required, an attractive salary being offered to an experienced applicant. The position calls for high technical qualifications, progressive ideas and, what is really essential, a practical outlook. These qualifications are necessary in order to produce equipment for the market that is of high quality and yet competitive. A written application is invited in the first instance, giving full details of educational and academic qualifications, together with achievements in the practical field. Box No. 1831, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Production Engineer. Work Study Engineers are required by a firm in West Midlands producing aircraft and hydraulic components. Applicants should have served an apprenticeship and reached H.N.C. production engineering standard. Salary commensurate with experience, etc. Box No. 1832, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Material Controller. This post has become vacant as a result of the continued growth of the Company, and the promotion of executives to other positions. The Material Controller is responsible directly to the Assistant Managing Director for the Purchasing and Value Analysis Departments. Candidates should have a broad practical experience in the light electro-mechanical manufacturing industry, with supporting educational qualifications at least to H.N.C. level. Knowledge and appreciation of production control functions a considerable advantage. Age between 35-40. Personal characteristics should be compounded of resilience, initiative and potential to advance in responsibility. Write in first instance, outlining experience, age and salary level expected to: Personnel Manager, Black & Decker Ltd., Bath Road, Harmondsworth, Middlesex.

Production Manager. J. Stone & Co. (Charlton) Ltd. A vacancy exists for a Production Manager in a large non-ferrous foundry situated in the London area. Candidates should be over 35 years old and at present holding a position of senior works management in either the non-ferrous founding industry or an engineering organisation closely allied to it. An overall knowledge of foundry practice is desirable, with experience in production engineering and control; knowledge of works layouts, etc., would be an advantage. This is a senior executive appointment, being directly responsible to the Production Director and in charge of a variety of operations employing about 500 operatives. An attractive salary will be offered for this position. A contributory pension scheme is in operation. Applications, marked "confidential", should be addressed to: The Production Director (General Foundries), J. Stone & Co. (Charlton) Ltd., Woolwich Road, Charlton, London, S.E.7.

Chief Estimator. J. Stone & Co. (Charlton) Ltd. A new position has been created in a large engineering and non-ferrous organisation in the London area for a Chief Estimator. Applications are invited from engineers, preferably qualified, with foundry experience in the non-ferrous field, covering all types of castings. This is a senior staff appointment and will carry a high starting salary. The successful candidate will be directly responsible to the Technical Manager and his function will cover all aspects of the Company's production operations, other than marine. The Company employs about 1,000 people and a contributory pension fund is in operation. Applications, marked "confidential", should be addressed to: The Production Director (General Foundries), J. Stone & Co. (Charlton) Ltd., Woolwich Road, Charlton, London, S.E.7.

Electrical Engineer. Allens, of Bedford, have a vacancy in their Production Engineering Department for an Electrical Engineer with experience in the development of manufacturing methods for medium/heavy electrical machinery and control gear. Preference will be given to candidates who are Corporate Members of The Institution of Electrical Engineers and The Institution of Production Engineers. Candidates should be between the ages of 28-45 and should make their application, in writing, giving full details to: The Personnel Manager, Queens Engineering Works, Bedford.

Senior Production Engineer. We wish to appoint a man to lead a new department concerned with the overall planning and control of the wiring and assembly of a wide range of electronic equipment. Applicants should be conversant with mechanisation in batch production and should be capable of initiating the design of simple devices for improving manufacturing efficiency as eventually they may lead a team to develop new production techniques. Work study, planning and scheduling experience is, of course, essential. This appointment offers an exceptional career opportunity with one of the foremost growth companies in this country and a good four-figure salary will be paid. Please apply to: The Personnel Officer, The Solartron Electronic Group Ltd., Farnborough, Hampshire.

Jig and Tool Draughtsman (experienced) required for a wide variety of interesting work. Generous pension scheme and comprehensive amenities. Excellent conditions of employment. Apply, giving details of experience, etc. to: The Personnel Manager, W. H. Allen, Sons, & Co. Ltd., Queens Engineering Works, Bedford.

Works Manager required by an old-established public company for a large modern factory in South-East London making products for the building, packaging and engineering industries. A major reorganisation is needed to increase utilisation, reduce costs and generally improve efficiency. The new Works Manager would be responsible for this and, in consequence, the qualities sought are those of initiative, personality and drive. Experience of modern production methods in a well-run factory is more important than experience of the particular industry. The salary will ensure that the successful applicant finds it worthwhile to move, the present utilisation of the factory indicating a figure between £1,750-£2,500. Apply to: The Directors, Box No. 1833, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Project Engineer (Oil Burning). Smith's Motor Accessory Division. Applications are invited from suitably qualified engineers for the above vacancy. The factory is situated at Witney, 12 miles from Oxford, and a modern house (to rent) will be made available to the successful applicant. Work includes initiating and progressing development test programmes on light oil burning equipment. H.N.C. required, plus apprenticeship, or equivalent. Knowledge of control circuits and equipment essential, also experience on oil burning equipment. Salary will be in accordance with experience and qualifications. Applications in confidence to: Personnel Manager, S. Smith & Sons (England) Ltd., Motor Accessory Division, Witney, Oxfordshire.

General Works Manager; Works Manager; Education and Training Officer. Due to reorganisation and promotion the following vacancies will shortly occur in a precision engineering works employing 1,000 people, located in the Birmingham area. **General Works Manager.** Aged 40-50 years, with proven experience of modern management and production techniques and having exceptional organising ability. His character and background should make him suitable for possible appointment to the Board at a later date. Salary £2,250-£2,500, or higher for a particularly well-qualified person. **Works Manager.** Aged 35-40 years, with a background of practical works management experience, a knowledge of modern machining techniques, and ability to fit into an established team. Salary £1,500-£2,000, or higher for a particularly well-qualified person. **Education and Training Officer.** Aged 35-45 years, who has held a similar post in the engineering industry and with the necessary qualifications and ability to reorganise a training scheme for approximately 200 apprentices. Salary £1,000-£1,250. All the above posts are superannuated. Usual canteen and welfare facilities. For further information and an application form please contact: Birmingham Productivity Association, Technical Advisory Service Ltd., 95 New Street, Birmingham, 2. (Please state clearly the appointment concerned.)

Works Engineer required by self-contained engineering organisation in South of England. Full responsibility given for control of all factory services and plant development schemes. Minimum technical standard, H.N.C., good knowledge of electrical engineering important. Box No. 1834, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Work Study Department. D. Napier & Son Ltd., Acton, London, W.3, have two vacancies in their Work Study Department. Applications are invited from men of good personality who can show evidence of ability to analyse production problems objectively and carry assignments through to a successful conclusion. For one appointment, previous experience of method study is essential. Salaries will be in the range £750-£1,000 per annum. Engineering experience would be an advantage. Please write giving full details of experience and qualifications to: Dept. C.P.S., Marconi House, The Strand, London, W.C.2 (quoting Ref.: PE 794E).

First-class Production Engineer. Are you a first-class production engineer, with experience in production management? If so, you are invited to write to us as we are looking for such an executive to be responsible for all aspects of operational research in our production division. Candidates for this responsible post should be in the 30-40 bracket and have had sound training in engineering. Comprehensive experience in processing liquids and semi-solids in bulk and with automatic packaging machinery would be an advantage. A commencing salary of about £1,500 per annum is envisaged. This is a well-established, highly regarded, international Company and a large new factory is planned near Camberley, Surrey. Attractive profit sharing and pension schemes are in operation. Please write to: The Personnel Manager, S. C. Johnson & Son Ltd. (Johnson's Wax Products), West Drayton, Middlesex, and give full details including present salary. All applications will be treated in complete confidence.

EDUCATIONAL APPOINTMENTS

Farnborough Technical College.

Assistant Lecturers (Grade B) in General Engineering; Assistant Lecturer (Grade A) in Engineering. Applications are invited for the following posts: Assistant Lecturers (Grade B) in General Engineering. To assist in courses for National Certificate in Mechanical Engineering, Electrical Engineering and in Applied Physics. Assistant Lecturer (Grade A) in Engineering. To assist in courses leading to City and Guilds Certificates in motor vehicle mechanics work and in Machine Shop Engineering. Salaries are in accordance with the Burnham Scale for Teachers in Technical Colleges: Assistants (Grade A), £475 × £25 — £900; and Assistants (Grade B), £650 × £25 — £1,025; with the usual allowances for training, qualifications and industrial experience, e.g., £125 for a good Honours degree. Further particulars and application forms may be obtained from: The Principal, Farnborough Technical College, Boundary Road, Farnborough, Hampshire, to whom they should be returned as soon as possible.

Royal Technical College, Salford.

Readers in Mechanical Engineering. Applications are invited for one or more vacancies of Reader in the Department of Mechanical Engineering. The person or persons appointed will be primarily concerned with leading research in appropriate fields of mechanical engineering, and may also lead other advanced studies. Applicants should have records of proven research ability in some field of mechanical engineering. No one field of research experience is required and applications from those with an interest in fundamental research into manufacturing processes or machine tools would also be welcomed. Teaching experience, though a valuable additional qualification, is not essential. The Department has a substantial number of students working for the Diploma in Technology, and research facilities are being rapidly expanded. Salary will be in accordance with the Burnham Technical Scale for Readers, viz., £1,500-£1,800. Forms of application, together with further particulars, may be obtained from: The Registrar, Royal Technical College, Salford, 5, to whom they should be returned as soon as possible.

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